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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,920	09/29/2000	Gary D. Zimmerman	10001745-1	8995

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Agilent Technologies  
Legal Department 51UPD  
Intellectual Property Administration  
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EXAMINER

PHAM, THIERRY L

ART UNIT PAPER NUMBER

2624

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/675,920

Applicant(s)

ZIMMERMAN ET AL.

Examiner

Thierry L Pham

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Terashima et al (U.S. 6538762).

Regarding claim 1, Terashima discloses a printing system (fig. 2) comprising:

- (a) a host device (host computer, fig. 2) for executing programs;
- (b) an office machine (printer, fig. 2) having a print engine for receiving print engine ready data and based thereon for rendering images and a PC card slot (a parallel port slot for connecting PC Card (printer controller ASIC circuit 5, fig. 2, col. 4, lines 30-37)) for receiving PC cards (printer controller ASIC circuit 5, fig. 2, col. 3, lines 60-67 and col. 11, lines 25-32); and
- (c) a PC card (printer controller ASIC circuit 5 operates an a PC card, fig. 2) for removably (printer controller ASIC circuit 5 is connected to the printer via a parallel port, fig. 2, and it is known in the art that devices with parallel port connection is removable) coupling with the PC card slot (parallel port, col. 4, lines 30-37) of the office machine and for coupling with the host device (coupling to the host computer, fig. 2), the PC card having a formatter integrated circuit (i.e. color conversion half-toning section, fig. 5) for providing formatter functions (i.e. color conversion processing, fig. 5, col. 6, lines 3-15), the formatter integrated circuit for receiving printer controller ready data (receiving print data from the host computer, fig. 2) from the host device and based thereon for generating print engine ready data.

Regarding claim 5, Terashima discloses an office machine (printer, fig. 2) comprising:

- (a) a rendering engine (inherently, all printers include a print engine) for rendering images; and

Art Unit: 2624

(b) PC card slot (a parallel port slot for connecting PC Card (printer controller ASIC circuit 5, fig. 2, col. 4, lines 30-37)) coupled to the rendering engine for receiving a removable PC card (printer controller ASIC circuit 5 is connected to the printer via a parallel port, fig. 2, and it is known in the art that devices with parallel port connection is removable), wherein the PC card slot is utilized to transfer formatter output from the removable PC card (transferring image data and/or print data from the PC card (printer controller 5) to printer, fig. 2) to the rendering engine.

Regarding claim 6, Terashima further discloses the office machine of claim 5 further comprising:

(c) a print engine ready data interface (parallel port cable 15, fig. 2, col. 4, lines 62-67) for coupling to a PC card and selectively receiving print engine ready data (print data and/or image data, col. 5, lines 1-40) therefrom.

Regarding claim 7, Terashima further teaches the office machine of claim 5 wherein the office machine is one laser printer (laser printer, col. 12, lines 8-15), ink jet printer, and an all-in-one office machine.

Regarding claims 8-9, please see rejection rationale/basis as described in claims 5-6 above.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashima as described in claim 1 above, and in view of Benjamin et al (U.S. 6113208).

Art Unit: 2624

Regarding claim 2, Terashima discloses a printer formatter firmware (i.e. backend parameters programs, col. 6, lines 15-40) that when executed by the printer formatter causes the printer formatter to perform formatter functions.

However, Terashima does not teach wherein a printing software having an automatic update module that when executing on the host device automatically downloads to the host device from a source one of an device automatically downloads to the host device from a source one of an updated version of printer formatter firmware and the printing software.

Benjamin, in the same field of endeavor for printing, teaches wherein a printing software having an automatic update module that when executing on the host device automatically downloads (automatically downloading updated/version of printer driver via Internet/Website, col. 3, lines 50-67 to col. 4, lines 1-40) to the host device from a source one of an device automatically downloads to the host device from a source one of an updated version of printer formatter firmware and the printing software.

It would have been obvious to one of ordinary skill in the art at the time of the invention wad made to modify Terashima as per teachings of Benjamin because of a following reason: (1) downloading and installing the latest/newest compatible printer driver will improve operating efficiency of the printer.

Therefore, it would have been obvious to combine Terashima and Benjamin to obtain the invention as specified in claim 2.

Regarding claim 3, Benjamin further teaches the printing system of claim 2, wherein the source is one of a web server (Internet web server, col. 3, lines 50-67 to col. 4, lines 1-40) and a computer readable medium.

Regarding claim 4, Benjamin further teaches the printing system of claim 2 wherein the automatic update module when executing on the host device automatically downloads (automatically downloading updated/version of printer driver via Internet/Website, col. 3, lines 50-67 to col. 4, lines 1-40) to the printer formatter an updated version of printer formatter firmware.

Art Unit: 2624

5. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashima (U.S. 6538762), and in view of Ohara et al (U.S. 6438643).

Regarding claim 10, Terashima discloses a method of printing in a system (printing system, fig. 2) that includes an office machine (printer, fig. 2) having a print engine and a slot (parallel port slot, col. 4, lines 30-37) for receiving a PC card (printer control ASIC circuit, fig. 2), a PC card for removably (printer controller ASIC circuit 5 is connected to the printer via a parallel port, fig. 2, and it is known in the art that devices with parallel port connection is removable) coupling to the office machine, the PC card having a printer formatter printer (i.e. color conversion halftoning section, fig. 5) and a memory (memory device 41, fig. 5) for storing a printer formatter program (i.e. backend parameters/commands programs, col. 6, lines 15-40), a host having a printing software, the method comprising the steps of:

- (a) determining whether the PC card has been operationally coupled to the slot of the office machine (fig. 2 shows a printer controller 5 is connected to the printer via parallel port, col. 4, lines 30-37);
- (b) when it is determined that the PC card has been operationally coupled to the office machine, then determining whether the printer formatter program (i.e. backend parameters/commands programs for processing image data, which is loaded in the printer controller, col. 6, lines 15-40) is loaded in the memory of the printer formatter; otherwise proceeding to step (a);

However, Terashim does not disclose wherein (c) when it is determined that the printer formatter program is loaded in the memory, then determining whether the printer controller program is valid; otherwise, loading the printer formatter program into the memory and repeating step (c);

- (d) when it is determined that the printer formatter program is valid, then determining whether the printer formatter program is compatible with the print engine, the printing software and printer formatter;

- (e) when it is that the printer formatter program is loaded, valid, and compatible with the print engine, the printing software and printer formatter, then sending data from the to be printed to the printer formatter.

Ohara, in the same field of endeavor for printing, teaches (c) when it is determined that the printer formatter program is loaded in the memory, then determining whether the printer

Art Unit: 2624

controller program is valid (determine if the printer controller program is valid, and if the current version is not valid, then updating to the most current version of printer controller software, figs. 8-11, col. 17, lines 22-67); otherwise, loading the printer formatter program into the memory and repeating step (c);

(d) when it is determined that the printer formatter program is valid, then determining whether the printer formatter program is compatible with the print engine, the printing software and printer formatter (performing the compatibility test to determine whether the printer controller software is valid, compatible, fig. 14);

(e) when it is that the printer formatter program is loaded, valid, and compatible with the print engine, the printing software and printer formatter, then sending data to be printed to the printer formatter (sending the print data to the printer controller CPU 11 from the host computer of fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Terashima as per teachings of Ohara because of a following reason: (1) downloading and installing the latest/newest compatible printer driver will improve operating efficiency of the printer.

Therefore, it would have been obvious to combine Terashima and Ohara to obtain the invention as specified in claim 10.

Regarding claim 11, Ohara further teaches the method of claim 10 further comprising:

(d1) when the printer controller program is one of not loaded, invalid, and incompatible, then notifying (notifying via display unit, fig. 14) a user of the incompatibility.

Regarding claim 12, Ohara further teaches the method of claim 10 further comprising;

(d1) when the printer controller program is one of not loaded, invalid, and incompatible, then downloading (downloading the printer controller program from the file server, col. 27, lines 8-25) the printer controller program to the memory.

Regarding claim 13, Ohara further teaches the method of claim 12 wherein the step of downloading the printer controller program to the printer controller further comprises:

Art Unit: 2624

downloading the printer controller program from the host to the memory (downloading the printer controller program from the file server and storing in ROM 12 of Fig. 1, col. 27, lines 8-25).

Regarding claim 14, Ohara further teaches the method of claim 12, wherein the step of downloading the printer controller program to the printer controller further comprises: downloading the printer controller program from a web site (downloading the printer controller program from the internet file server and storing in ROM 12 of Fig. 1, col. 27, lines 8-25) to the memory.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohara and Terashima as described in claim 10 above, and further in view of Austin (U.S. 6665089).

The combinations of Ohara and Terashima as described in claim 10 above do not explicitly teach wherein the step of determining whether the printer controller program is valid further comprises: performing a cyclic redundancy check on the printer controller program.

Austin, in the same field of endeavor for printing, teaches the step of determining whether the printer controller program is valid further comprises: performing a cyclic redundancy check (Fig. 18, col. 12, lines 60-67 to col. 13, lines 1-30) on the printer controller program.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Ohara and Terashima as per teachings of Austin because of a following reason: (1) an additional method of testing (CRC checking method) increase the flexibility of testing the printer controller programs to provide an accurate results.

Therefore, it would have been obvious to combine Ohara and Terashima with Austin to obtain the invention as specified in claim 15.



Art Unit: 2624

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (1) U.S. 6426801 to Reed, discloses a PC card and PC card slot (Fig. 1-6).

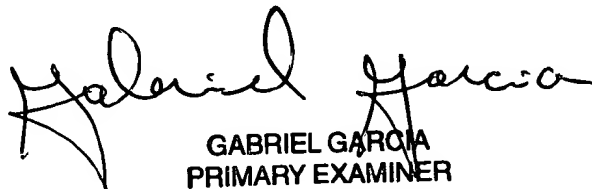
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L Pham whose telephone number is (703) 305-1897. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on (703)308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

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